

AMENDMENTS TO THE CLAIMS:

This listing of claims will replace all prior versions, and listings, of claims in the application:

1. (currently amended) An electrostatically controlled A-device for transmitting a beam of material in particulate form at a target surface to be coated, said device comprising: an outer bell-shaped member which is rotatable about a principal axis and arranged to project a conical curtain of small particles flowing generally towards a target, towards said target surface;

a supply system for supply of supplying material from a reservoir source and centrally outwards from said principal axis and towards a peripheral internal shaping region of said outer bell-shaped member; to create said conical curtain of small particles

characterised in that an inner rotary bell-shaped member is provided provided coaxially with said outer bell-shaped member and is arranged arranged to rotate a different rate to that of differently to said outer bell-shaped member so that at least a major part of the material emerging from said supply means supplied by said supply system is subject to differing rotary forces imparted by both the inner and outer rotary bell-shaped members; and

a centrally located rotary diffuser disc for transmission of said material from said supply system to the inner rotary bell-shaped member, said disc having at least one aperture therethrough so that some of said material supplied by said supply system can pass through said aperture and onto an external face of said disc so as to be forced outwards centrifugally towards the outer bell-shaped member.

2. (currently amended) A device for transmitting a beam of material according to claim 1 as claimed in claim 1, in which each bell-shaped member is integral with an air turbine which is driven by air pressure to rotate said bell-shaped member.

3. (currently amended) A device for transmitting a beam of material according to claim 1 or 2 as claimed in claim 2, in which each bell-shaped member is arranged to be

supported and rotated on air bearings, and the bearings are supplied with air via conduits which are separate from conduits supplying air to the air turbines, so that the bearings are supplied with air separately from the air turbines.

Claim 4. (canceled).

5. (currently amended) A device ~~according to claim 4~~ as claimed in claim 1, which includes a centrally located rotary deflector which is arranged to deflect at least some of ~~the emergent~~ said material supplied by said supply system into contact with an internal surface of said inner bell-shaped member.

6. (currently amended) A device ~~according to claim 5~~ as claimed in claim 5, in which said diffuser disc and said deflector are integral with said inner bell-shaped member so as to rotate therewith.

7. (canceled).

8. (new) A device as claimed in claim 1, further comprising an air shaping ring for provision of a shaping curtain of air emanating to encircle and control said conical curtain of small particles.

9. (new) An electrostatically controlled coating device comprising:
a first rotary bell-shaped member having an axis of rotation and an internal shaping region arranged to project a conical curtain of particulate material towards a target surface;
a supply system for conducting said material towards said first rotary bell-shaped member; and
a distributor arrangement for distributing said material from said supply system onto said internal shaping region, said distributor arrangement comprising a second rotary bell-shaped member disposed inwardly of said first rotary bell-shaped member

and coaxial therewith and a rotary disc associated with said second rotary bell-shaped member and defining at least one through-hole leading from an inner face of said disc which faces said second rotary bell-shaped member to an outer face of said second rotary bell-shaped member which faces away from said second rotary bell-shaped member, the arrangement being such that a first portion of said material from said supply system is distributed to said internal shaping region via an internal surface of said second rotary bell-shaped member and a second portion to said material from said supply system is distributed to said internal shaping region via said at least one through-hole and said external face, and wherein said first and second rotary bell-shaped members rotate differently such that at least a major part of said particulate material is subject to differing rotary forces imparted by said first and second rotary bell-shaped members.

10. (new) A device as claimed in claim 9, wherein said first and second rotary bell-shaped members rotate in opposite directions.

11. (new) A device as claimed in claim 9, further comprising a deflector arranged to deflect said first portion of said material onto said internal surface of said second rotary bell-shaped member.

12. (new) A device as claimed in claim 11, wherein said rotary disc and said deflector are connected with said second rotary bell-shaped member so as to be rotatable therewith.

13. (new) A device as claimed in claim 9, wherein said disc is a frusto-conical disc disposed within said second rotary bell-shaped member and cooperable with said internal surface to define a passage for said first portion of said material.

14. (new) A device as claimed in claim 9, further comprising respective air turbines for said rotary bell-shaped members, respective air bearings for said air

turbines, and separate air supply conduits to said air bearings and said air turbines whereby said air bearings are supplied separately of said air turbines.

15. (new) In combination, a robot arm and an electrostatically controlled device for transmitting a beam of material in particulate form at a target surface to be coated, said device comprising:

- an outer bell-shaped member which is rotatable about a principal axis and arranged to project a conical curtain of small particles flowing generally towards said target surface;

- a supply system for supplying material from a reservoir source towards a peripheral internal shaping region of said outer bell-shaped member;

- an inner rotary bell-shaped member provided coaxially with said outer bell-shaped member and arranged to rotate differently to said outer bell-shaped member so that at least a major part of the material supplied by said supply system is subject to differing rotary forces imparted by the inner and outer rotary bell-shaped members; and

- a centrally located rotary diffuser disc for transmission of said material from said supply system to the inner rotary bell-shaped member, said disc having at least one aperture therethrough so that some of said material supplied by said supply system can pass through said aperture and onto an external face of said disc so as to be forced outwards centrifugally towards the outer bell-shaped member, and

wherein said device is mounted on said robot arm.